



BOEM Bureau of
Ocean Energy Management

National Offshore Sand Inventory

Supporting Coastal Resilience

December 8, 2022

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National Offshore Sand Inventory (NOSI)

- **Vision**

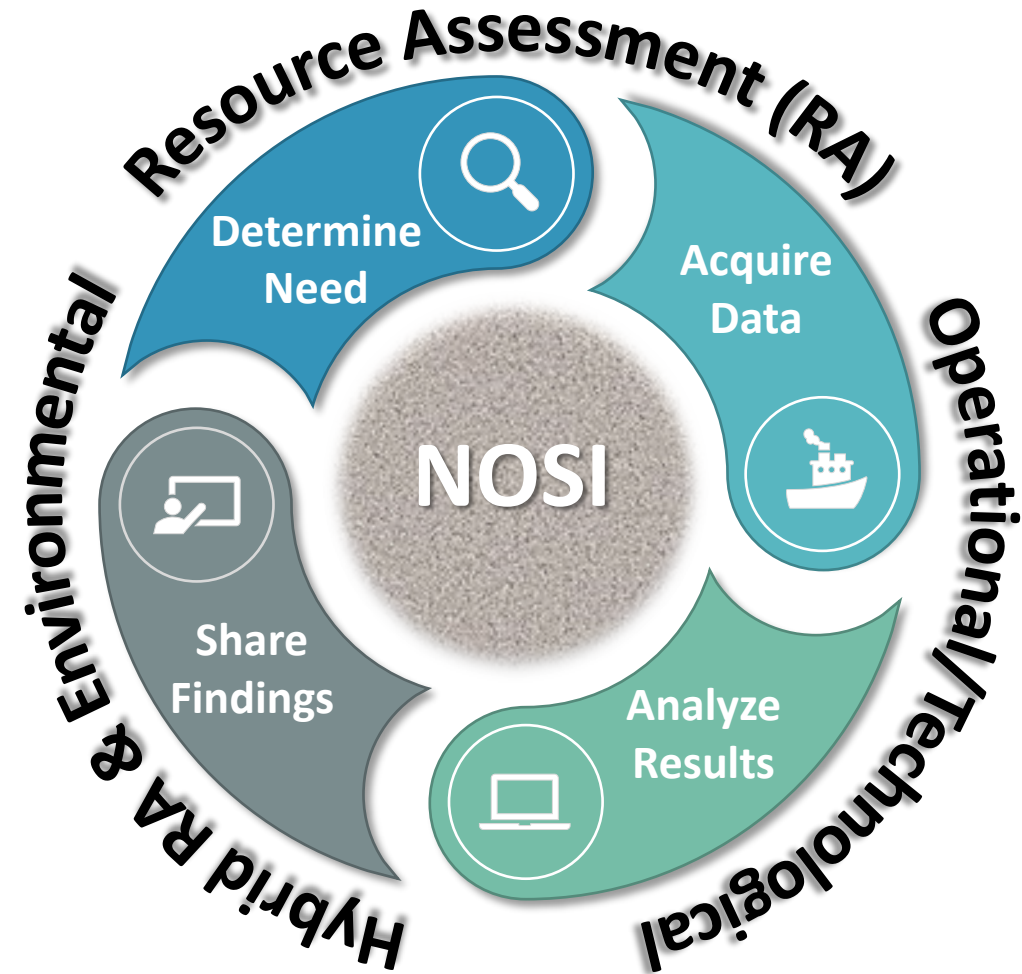
NOSI is the **first resource** consulted for offshore sediment management information.

- **Mission**

To provide **data, project insights, and analysis** to coastal and marine researchers, engineers; and local, state, federal, and tribal stakeholders; and decision makers for **coastal resilience** and **environmental and resource stewardship**.

- **Priority**

Atlantic and Gulf of Mexico



NOSI Research Themes

- **Supply and Demand** studies highlight need and direct spending
- **Resource Evaluation – Geologic Framework** studies inform where and why the resources are found where they are
- **Resource Evaluation – Sediment Budget** studies are used to anticipate effects of sediment removal and placement
- **Risk Mitigation** studies inform how to manage the resource in the least impactful way for all stakeholders
- **Borrow Area Optimization** studies maximize efficacy and minimize losses



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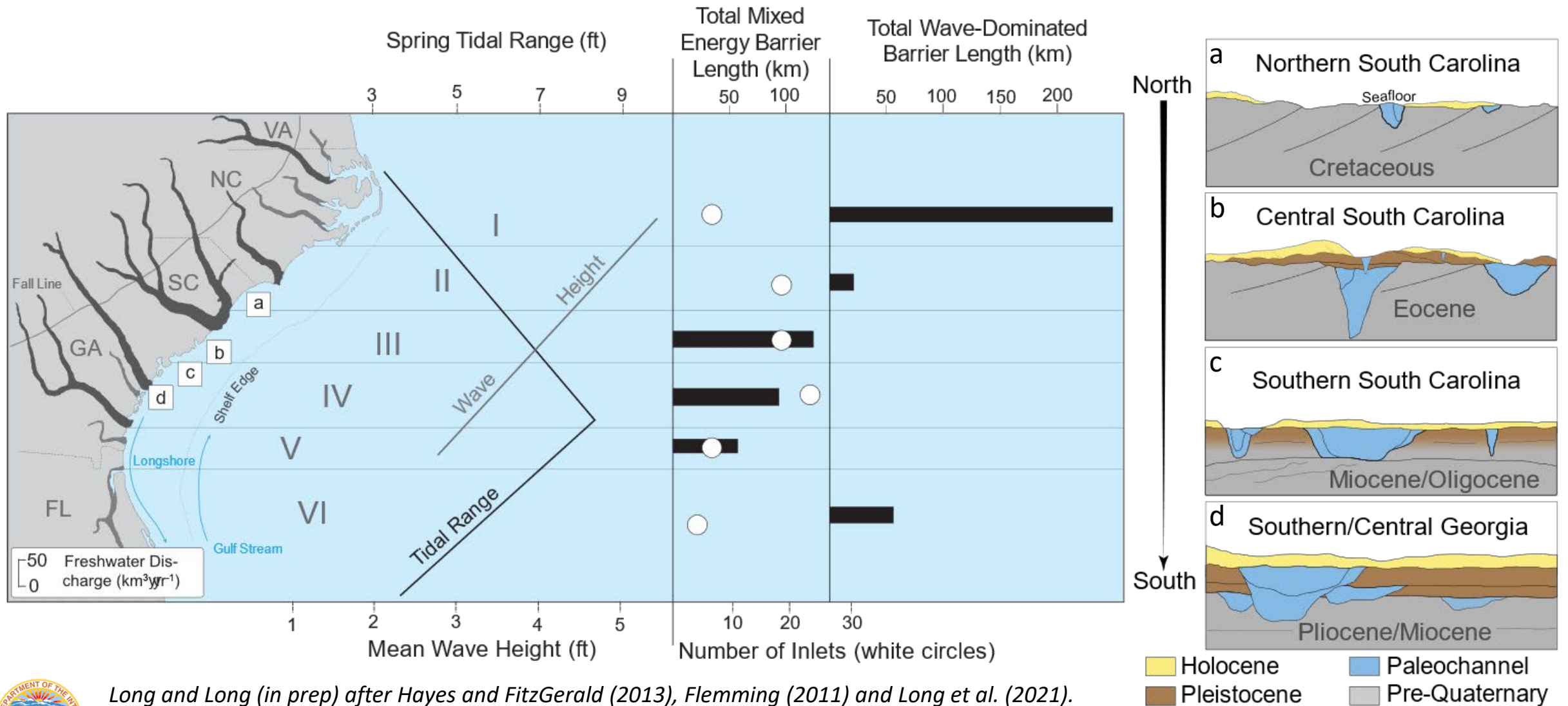


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SE US Coastal Compartments: Complimenting Onshore RSM



Long and Long (in prep) after Hayes and FitzGerald (2013), Flemming (2011) and Long et al. (2021).



Ongoing and Future Investments



Current New Starts and Future Investments

- Fiscal Year 2022

- Supply and Demand
 - NJ NJGWS COOP
- Resource Evaluation
 - TXGLO COOP
 - TX UTIG COOP
 - FL Atlantic G&G Task Order
- Risk Mitigation
 - Fish Fry UNCW COOP

- Fiscal Year 2023 (tentative)

- Focused on GOM and Atlantic
- Resource Evaluation
 - Up to 7 new projects
- Supply and Demand, Risk Mitigation, and Borrow Area Optimization
 - Up to 1 new project each



Conclusions

- NOSI advances planning and research for coastal compartments and offshore sediment that is critical to meet the need for coastal resilience projects.
- BOEM maximizes value from NOSI by:
 - Aligning NOSI efforts with onshore and nearshore Regional Sediment Management (RSM) studies and areas with the greatest need.
 - Funding research with the potential for regional or national implication.

Photographs of Roanoke Banks, NC before (left) and after (center) Hurricane Florence and after renourishment (right). Courtesy of Carteret County Beach Commission



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References

- Flemming (2011) “Geology, Morphology, and Sedimentology of Estuaries and Coasts” in Treaties on Estuarine and Coastal Science, vol. 3, p. 7-38.
- Hayes and FitzGerald (2013) “Origin, Evolution, and Classification of Tidal Inlets” Journal of Coastal Research, p. 14-33.
- Long, J., et al., 2021. “Depositional Environments and Stratigraphy of Quaternary Paleochannel Systems Offshore of the Georgia Bight, Southeastern U.S.A.” Journal of Coastal Research, 23 p.
- Long and Long (in prep) “An Integrated Quaternary Stratigraphic Framework for the Coastal Plain and Continental Shelf of the Southeastern United States” Continental Shelf Research.

